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Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 117-133, 141-147 and 155-179 are pending in the application, with 117, 122, 141, 155, 162 and 174 being the independent claims. Claims 134-140 and 148-154 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Support for the amendments to claims 117, 120, 121, 125-127, 131-133, 145-147, 159-161, 165, 166, 171-173 and 177-179 can be found in the claims as filed and throughout the specification. These amendments have been added to advance prosecution and to make explicit that which was implicit in earlier pending claims. *See Interactive Pictures Corp. v. Infinite Pictures Inc.*, 61 U.S.P.Q.2d 1152, 1157 (Fed. Cir. 2001). These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Interview With the Examiner

Applicants thank Examiner Mertz for the courtesy extended in the telephone interviews held on June 9 and June 15, 2004 with Peter Jackman. The claims presented herein and the following remarks reflect the issues that were discussed in those interviews.

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Rejections under 35 U.S.C. § 112, Second Paragraph

In Paper No. 8, the Examiner rejected claims 35, 47, 60, 73, 82, 83, 93, 94-97 and 99 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. (See Paper No. 8, page 4.)

The Examiner stated that claim 93 "is indefinite because it is not clear which amino acids comprise the transmembrane domain of SEQ ID NO:2 so as to allow the metes and bounds of the claims to be determined." (Paper No. 8, page 4.) Solely to advance prosecution, and not in acquiescence to the Examiner's rejection, Applicants canceled claim 93 in the Supplemental Amendment and Reply filed May 31, 2002, thereby rendering this rejection moot. Applicants respectfully request that the Examiner withdraw the rejection.

The Examiner also stated that claims 35, 47, 60 and 73 are indefinite "because it is unclear what 'activity' the G-protein coupled receptor has" and that "the 'activity' of the G-protein coupled receptor has not been disclosed in the claims nor the specification." (Paper No. 8, page 4.) Solely to advance prosecution, and not in acquiescence to the Examiner's rejection, Applicants canceled claims 35, 47, 60, and 73 in the Supplemental Amendment and Reply filed May 31, 2002, thereby rendering this rejection moot. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

Further, the Examiner stated that claim 82 and dependent claim 83 are indefinite "because it is unclear what is the mature polypeptide." (Paper No. 8, page 4.) Solely to advance prosecution, and not in acquiescence to the Examiner's rejection, Applicants canceled claims 82 and 83 in the Supplemental Amendment and Reply filed May 31,

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2002, thereby rendering this rejection moot. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection.

Claim Rejections under 35 U.S.C. § 101

Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 were rejected under 35 U.S.C. § 101 for allegedly not being supported by either a specific, substantial utility or a well established utility. (See Paper No. 8, page 5.) Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 were canceled in the Supplemental Amendment and Reply filed May 31, 2002. As far as this rejection applies to pending claims 117-133, 141-147 and 155-179, Applicants respectfully assert that the remarks and arguments regarding utility made in the Supplemental Amendment and Reply filed May 31, 2002 and the Amendment and Reply filed January 10, 2002 are fully applicable, and are incorporated by reference herein.

During a telephone interview on June 9, 2004, the utility rejection was discussed. The Examiner acknowledged the assertion in the specification of at least one specific, substantial and credible utility. In fact, as discussed in the interview, several utilities are asserted, primarily relating to diagnosis and treatment of vascular, coronary and nervous tissue diseases, as well as cancers. See, e.g., the specification at page 8, lines 18-20. For example, the specification asserts that antagonists to the G-protein coupled receptors of the invention can be used for the treatment of myocardial infarction. See specification at page 22, lines 29-32.

Thus, the claimed polynucleotides certainly provide identifiable benefit which is easily linked to general categories of diseases and disorders disclosed in the

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specification. This linkage was later borne out by Hollopeter, G. *et al.*, *Nature* 409(6817):202-7 (2001), which was submitted with the Amendment and Reply dated January 10, 2002. Hollopeter *et al.* demonstrate that the EBI-2 receptor of the present invention is primarily expressed in platelets (myeloid lineage) and brain, and that differential EBI-2 expression may indicate a perturbation in platelet aggregation, which can lead to myocardial infarction. Thus, this publication confirms a reasonable nexus between EBI-2 as disclosed in the present application, and the treatment and/or detection of heart disease.

In view of the above, Applicants submit that a skilled artisan would not reasonably doubt that the claimed polynucleotides can be useful in making EBI-2 proteins, generating antibodies or diagnosing and/or treating conditions such as heart disease. As such, Applicants have met their burden of showing that the presently claimed invention possesses a credible, specific and substantial utility that constitutes a patentable utility under 35 U.S.C. § 101. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 101 be reconsidered and withdrawn.

Claim Rejections under 35 U.S.C. § 112, First Paragraph

Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 were rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of enablement. (See Paper No. 8, page 13.) Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 were canceled in the Supplemental Amendment and Reply filed May 31, 2002. With respect to pending claims 117-133, 141-147 and 155-179, Applicants reiterate the remarks made previously. For the reasons discussed in

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the Amendment and Reply dated January 10, 2002, the Supplemental Amendment and Reply dated May 31, 2002, as well as the remarks above, Applicants respectfully assert that the claimed invention is supported by a specific, substantial and credible asserted utility. The Examiner "should not impose a 35 U.S.C. 112, first paragraph, rejection grounded on a 'lack of utility' basis unless a 35 U.S.C. 101 rejection is proper." M.P.E.P. § 2107 (IV) at 2100-36. Therefore, because the claimed invention complies with the utility requirement of 35 U.S.C. § 101, the rejections under 35 U.S.C. § 112, first paragraph, based on the alleged lack of utility of the claimed invention, should be withdrawn.

Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 were rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of written description. (See Paper No. 8 at pages 17-18.) As set forth in the Amendment and Reply dated January 10, 2002, Applicants respectfully disagree with the Examiner. However, solely to advance prosecution, and not in acquiescence to the Examiner's rejection, Applicants canceled claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-89, 91, 93-97 and 99 in the Supplemental Amendment and Reply filed May 31, 2002. Pending claims 117-133, 141-147 and 155-179 obviate the Examiner's concerns with respect to this rejection. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Rejections Under 35 U.S.C. § 112, First Paragraph - Deposit Rules

Claims 23-29, 31, 33-39, 41, 43-51, 53, 55-64, 66, 68-77, 79, 81-83, 84-89, 91

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94-97 and 99 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly being nonenabled for reciting deposited biological material. (See Paper No. 8, page 22.) The Examiner required that the specification be amended to recite the address of the ATCC, and required that particular averments be made concerning the deposit.

Applicants previously amended the specification accordingly. In addition, a "Statement Concerning the Deposited cDNA Clone" which contains the necessary averments was submitted on April 3, 2002. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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